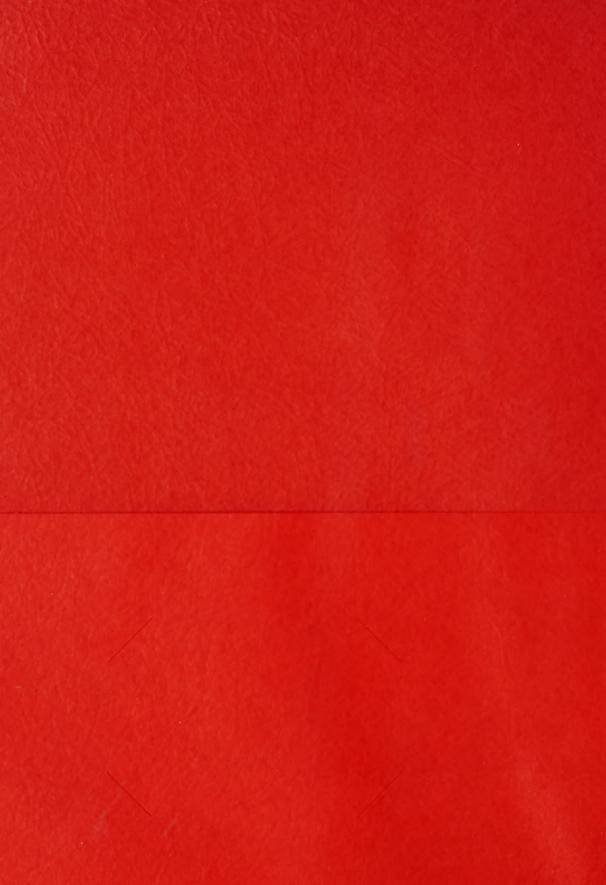Office equipment specification

OFFICE EQUIPMENT SPECIFICATION

Energy-Efficiency Guidelines for Procurement Professionals

Choosing equipment for everyone in the office can be quite a challenge. Users know the brand name they like and want all the latest features. The systems manager wants the most reliable equipment and must ensure compatibility with existing machines and software. The boss wants the lowest possible price and low operating costs. The building manager wants to reduce the impact on the building's electrical and cooling systems.

Now there is an easy way to make everyone happy — choose energy-efficient office equipment. The end result will be lower operating costs. Energy-efficient technology is used in a variety of brand name products that are sold at regular equipment prices.

How Much Money Can I Save?

The more equipment you have, the more you will save by buying energy-efficient machines. Compare the costs.

**Conventional System
On 24 Hours
Annual Electrical Cost $165**

**Energy-Efficient System
On 24 Hours
Annual Electrical Cost $84**

**Energy-Efficient System
Off at Night
Annual Electrical Cost $28**

(A typical computer, monitor and laser printer, assuming consumption of 0.235 kW of electricity at a cost of $0.08/kWh.)

Energy-Efficient Equipment — An Asset in Any Office

Today, computers account for seven per cent of office building electricity use, and unless office equipment becomes more energy efficient, this figure will continue to increase. Building managers have to plan for and accommodate this increasing demand to keep buildings running smoothly. They must limit the impact that office equipment (which generates a lot of heat) has on the heating, ventilation and air conditioning systems. They must also consider the impact of the electrical load on the distribution system.

There are broader environmental considerations too. Electricity generation contributes to air pollution and climate change and has other environmental impacts.

Reducing electricity demand through power management will help reduce these problems. By buying energy-efficient office equipment, you will limit electricity needs, lower building operating costs, help other building systems run efficiently and generate less pollution.

Facts & FICTION

There are many myths about computers. Here are just a few that may be making the rounds in your office.

FICTION: Computers use large amounts of energy when starting up. It is more cost-effective to leave them running all the time.

FACT: A personal computer uses about one second of running-time energy when starting up. It is far more cost-effective to turn it off when you finish using it.

FICTION: The heating and cooling cycles that result from turning computers on and off damage their boards and components.

FACT: Switching a machine off for a number of hours when it is not needed actually extends the machine life by reducing mechanical wear.

FICTION: Turning off machines causes hard drives to crash.

FACT: This is a fallacy dating from the days of old mainframe hard drives lubricated by soap, which would congeal if the drives were stopped. This is not a problem today because of modern lubricants. The unnecessary wear and tear that results from leaving systems on when they aren't in use is more likely to cause problems.

FICTION: Screen savers save energy.

FACT: Some screen savers are now so complex that they consume a lot of energy. Screen savers were designed for black and white or green screens to stop the menu bar from being burnt into the screen. Modern screens don't need screen savers, which are now used more for their entertainment value. In fact, the screen savers cost as much to run as a full screen of work. The best way to save energy is to turn your monitor off when it is not in use.

FICTION: Computers and other office equipment are small energy users.

FACT: A personal computer left on continuously consumes between $100 and $150 worth of electricity per year (at eight cents per kilowatt-hour). A large photocopier consumes close to $250 for the same timeframe. Since these machines generate heat while operating, they increase air conditioning costs too.

FICTION: Turning off computers or letting them go into sleep mode causes network problems.

FACT: Properly configured networks should allow users to turn off their computers and printers when they wish and should accommodate energy-efficient machines that sleep when they are not in use. Servers must always be left on.

FICTION: Turning off a computer at night, in the winter, will result in heat loss, which the heating system will have to make up.

FACT: Firstly, the interior offices in most large, modern office buildings are continuously cooled, and secondly, personal computers heat an office at a higher cost than most heating systems.

Reliable COMPUTING

The reliability of office equipment is extremely important because we depend on this technology to do business. One of the features that is common to all energy-efficient computer equipment is the "sleep" mode. When machines are not in use, they power down, resulting in less wear and tear. This can lead to an extended life and fewer service calls or replacements.

On All the Time
(graph shows 2 year life)

Off at Night
(graph shows 10 year life)

Energy Efficient and Off at Night
(graph shows 22 year life)

(Source Dataquest; 1993)

How Do I Know if Equipment is Energy Efficient?

There are two North American labelling programs to help you identify energy-efficient office equipment.

EcoLogo is the mark of Environment Canada's Environmental Choice Program. The EcoLogo can be found on fax and photocopy machines and even on the supplies you will need to operate your equipment – paper, envelopes, and printer and toner cartridges.

The Energy Star Program, sponsored by the United States Environmental Protection Agency, has signed partnership agreements with leading manufacturers to promote the development of energy-efficient equipment. These companies sell more than 75 per cent of all desktop computers and 90 per cent of all laser printers sold in the United States.

For More Information

The Internet is a good source of up-to-date information on energy-efficient office equipment. Here are just a few web sites that may help you with your research.

If you would like more information on the EcoLogo, visit **http://www.terrachoice.ca.**

If you would like a list of products that meet the criteria of the Energy Star Program, visit **http://www.epa.gov/docs/GCDOAR/EnergyStar.html.**

The New Zealand Energy Efficiency and Conservation Authority can be reached at **http://www.energywise.co.nz/office/office.html**.

You can download the *Guide to Buying and Using Energy-Efficient Office Equipment* at **http://eeb-dee. nrcan.gc.ca,** or contact

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